

Amendments to the Claims

1. *(Currently Amended)* A method of manufacturing an electronic device comprising a micro-electromechanical systems (~~MEMS~~) element, which MEMS element comprises a first and a second electrode, which second electrode is movable towards and from the first electrode, which method comprises the steps of:

- providing an etch stop layer (~~18~~) of electrically insulating material at a first side of a substrate (~~14~~);
- providing a base layer (~~10~~) of an electrically conductive material at the first side of the substrate (~~14~~), in which base layer the first electrode is defined;
- providing a sacrificial layer (~~16~~), which at least covers the first electrode in the base layer (~~10~~);
- providing a mechanical layer (~~12~~) of an electrically conductive material on top of the sacrificial layer (~~16~~), said mechanical layer (~~12~~) being mechanically connected to the substrate (~~10~~);
- providing a mask (~~20~~) on top of the mechanical layer (~~12~~) which includes at least one window (~~21~~) to the sacrificial layer (~~16~~), and
- removing selective areas of said sacrificial layer (~~16~~) by means of dry chemical etching, such that the second electrode is made movable towards and from the first electrode,

wherein said dry chemical etching is performed using a fluorine-containing plasma, and the etch stop layer (~~18~~) comprises a substantially non-conducting, fluorine chemistry inert material.

2. *(Currently Amended)* A method as claimed in Claim 1, wherein the sacrificial layer (~~16~~) comprises anorganic material.

3. *(Currently Amended)* A method as claimed in Claim 2, wherein the device further comprises a thin-film capacitor (~~50~~) having a first and a second electrode (~~51,52~~) and an intermediate dielectric, which first electrode (~~51~~) is defined in the base layer (~~10~~) and which dielectric is defined in the sacrificial layer (~~16~~), this capacitor part of the sacrificial layer (~~16~~) not being removed.

4. *(Currently Amended)* A method as claimed in Claim 1, wherein the etch stop layer ~~(18)~~ is provided at the first side of the substrate ~~(14)~~ before provision of the base layer ~~(10)~~.

5. *(Currently Amended)* A method according to claim 1, wherein said fluorine-containing plasma is a CF_y plasma.

6. *(Currently Amended)* A method as claimed in Claim 1, further comprising the steps of:

- providing an intermediate layer ~~(11)~~ of an electrically conductive material on the sacrificial layer ~~(16)~~, in which intermediate layer ~~(11)~~ the second electrode is defined; and
- providing a second sacrificial layer ~~(17)~~, which covers the second electrode at least partially, said second sacrificial layer ~~(17)~~ being removed in the same step as the first sacrificial layer ~~(16)~~.

7. *(Currently Amended)* A method as claimed in Claim 6, wherein the base layer ~~(10)~~ is provided with a contact pad, at least one window in the first and the second sacrificial layer ~~(16, 17)~~ leaving the contact pad exposed until filling of the window during provision of the mechanical layer ~~(12)~~ and wherein the window in the first sacrificial layer ~~(16)~~ is provided after deposition of the second sacrificial layer ~~(17)~~.

8. *(Currently Amended)* An electronic device comprising a micro-electromechanical systems ~~(MEMS)~~ element at a first side of a substrate ~~(14)~~, which MEMS element comprises a first ~~(10)~~ and a second electrode ~~(12)~~ that is movable towards and from the first electrode ~~(10)~~ between a closed and an opened position, and that is separated from the first electrode ~~(10)~~ by an air gap in its opened position, characterized in that the device is provided with an etch stop layer ~~(18)~~ between the first electrode ~~(10)~~ and the substrate ~~(14)~~, which etch stop layer ~~(18)~~ comprises a substantially non-conducting, fluorine chemistry inert material.

9. *(Currently Amended)* A device as claimed in ~~claim 8 or a method as~~
~~claimed in~~ Claim 1, wherein said etch stop layer ~~(18)~~ comprises a Group IV_n-oxide.

10. *(Currently Amended)* A device or method as claimed in Claim 9, wherein
said etch stop layer ~~(18)~~ comprises HfO₂, ZrO₂, Al₂O₃ or TiO₂.

11. *(Currently Amended)* A device as claimed in ~~Claim 8 or a method as~~
~~claimed in~~ Claim 1, characterized in that the substrate ~~(14)~~ is a silicon substrate.